#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-000869 Address: 333 Burma Road **Date Inspected:** 17-Nov-2007

City: Oakland, CA 94607

**OSM Arrival Time:** 2300 **Project Name:** SAS Superstructure **OSM Departure Time:** 730 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes No Xu Zhonghai **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG & Tower Mock Ups

**Summary of Items Observed:** 

Orthotropic Box Girder (OBG):

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the OBG Mock Up.

Bay 1:

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to blend the weld reinforcement on the welds attaching the diaphragms to OBG Mock Up MU-MC-1. The attached photograph provides additional detail.

Bay 2:

Elevation 114M:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Tower Mock Up.

The QA Inspector randomly observed ZPMC welder Jiang Zhou ID Number 040261, utilizing the Flux Cored Arc Welding (FCAW) Process with approved ZPMC Weld Procedure Specification (WPS) WPS-345-FCAW-1G(1F)-Repair, to perform a weld repair at Weld Joint (WJ) 8 on Skin Plate B Upper,

Sub-Assembly MUSC-MA101 per ZPMC Critical Weld Repair (CWR)Numbers 004 and 012. The QA Inspector

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randomly observed that both CWR004 and CWR012, were included in a single excavation of 667 millimeters long in WJ 8. The QA Inspector observed ZPMC CWI Xu Zhonghai monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 311 amps, welding voltage 32 volts with a travel speed of 300 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Tao Qian ID Number 040457, utilizing the Flux Cored Arc Welding (FCAW) Process with approved ZPMC Weld Procedure Specification (WPS) WPS-345-FCAW-1G(1F)-Repair, to perform a weld repair at WJ 12 on Skin Plate D Lower, Sub-Assembly MUSC-MA110 per ZPMC Critical Weld Repair CWR015. The QA Inspector observed ZPMC CWI Xu Zhonghai monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 310 amps, welding voltage 31.5 volts with a travel speed of 315 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to blend the weld reinforcement on the welds attaching the longitudinal stiffeners to Interior Splice Assembly MUC-A75. The attached photograph provides additional detail.









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## **Summary of Conversations:**

There were no relevant conversations.

### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Franco, Charlie	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer